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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,204	04/11/2001	Tsutomu Wakabayashi	109239	1169

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EXAMINER
PARKER, KENNETH

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,204	WAKABAYASHI ET AL.	
	Examiner	Art Unit	
	Kenneth A Parker	2871	

-- Th MAILING DATE of this c mmunication appears on th cover she t with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-16* is/are rejected.

7)☒ Claim(s) *6 and 17-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 9, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margerum et al, U.S. Patent # 5,099,343 in view of Doane et al, US Patent 5,240,636 and Parker, US Patent #6,079,838.

Margerum et al discloses a liquid crystal device with a diffusing layer comprising segments which are driven to be diffusing in the off state and transparent in the on state. The light source is element 34, reflector 42, waveguide 30 and 46. Driving circuit is minimally shown, but can be discerned as element 28, and is described as turning on and off segments in column 3, lines 21-30. The waveguide is the same thickness as the cell, which is substantially the same thickness as two of the substrates as the thickness of the liquid crystal is 15 um in thickness. Lacking form the disclosure is the diffusing in the on state and transparent in the off state. Doane et al discloses such a device, teaching that it has the benefits of being haze free have improved electrical responses (col. 4, lines 3-5). Therefore it would have been obvious, in the device of Margerum et al, to employ the PDLC device of Doane et al for these benefits taught by Doane et al. Light passing through the electrodes will be somewhat absorbed, and therefore would be restricted.

The shading of sides where light is not incident was well known in the liquid crystal art for preventing stray light from entering the display, and would have been obvious for that reason.

Still lacking is the parabolic element longitudinally located. If longitudinally located just implies along the end (extending), then the second reference is not required. If longitudinally located were taken to mean that the parabola was in the plan of the light guide, then teaching

from the reference Parker is applied. It is the examiners position that the parabola is not limited to being in the plane of the light guide with the current teaching, so the secondary reference Parker is not required. Because the examiner believes it is applicants intent to interpret the claim as having the parabola in the plane of the light guide, the secondary reference is applied so applicant may amend accordingly.

The waveguide of Parker with the parabolic section off to the side had the benefit of providing a uniform output and to be made thinner, and would have been obvious in place of the reflector of Bergman (oriented perpendicular to the plane of the waveguide) for that reason. See Parker col, 1, lines 45-67.

3. Claims 9, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergman, U.S. Patent #5,708,487 in view of Doane et al, US Patent 5,240,636 and Parker, US Patent #6,079,838.

Bergman discloses a liquid crystal device with a diffusing layer comprising segments which are driven to be diffusing in the off state and transparent in the on state. The light source is element 3, reflector 4, the waveguide is the protruding section of the substrate 7. Driving circuit is discussed in column 4, lines 27-65. The electrodes are on both sides, so the waveguide is along a side with electrodes. Lacking form the disclosure is the diffusing in the on state and transparent in the off state. Doane et al discloses such a device, teaching that it has the benefits of being haze free and have improved electrical responses (col. 4, lines 3-5). Therefore it would

have been obvious, in the device of Bergman , to employ the PDLC device of Doane et al for these benefits taught by Doane et al.

The shading of sides where light is not incident was well known in the liquid crystal art for preventing stray light from entering the display, and would have been obvious for that reason.

Still lacking is the parabolic element longitudinally located. If longitudinally located just implies along the end (extending), then the second reference is not required. If longitudinally located were taken to mean that the parabola was in the plan of the light guide, then teaching from the reference Parker is applied. It is the examiners position that the parabola is not limited to being in the plane of the light guide with the current teaching, so the secondary reference Parker is not required. Because the examiner believes it is applicants intent to interpret the claim as having the parabola in the plane of the light guide, the secondary reference is applied so applicant may amend accordingly.

The waveguide of Parker with the parabolic section off to the side had the benefit of providing a uniform output and to be made thinner, and would have been obvious in place of the reflector of Bergman (oriented perpendicular to the plane of the waveguide) for that reason. See Parker col, 1, lines 45-67.

4. Claims 1-5, 7-8 and 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergman, U.S. Patent #5,708,487 in view of Doane et al, US Patent 5,240,636 and Parker, US Patent #6,079,838 as applied above, and further in view of Oe

Parabolic reflectors were conventionally employed with the linear source lamps at the focus. This is taught by Oe, which explicitly makes such a statement in column 1, lines 16-22. Therefore, it would have been obvious, in the device of Bergman as modified by Doane et al, to employ a parabolic reflector with the linear source lamp at the focus as such was conventional at the time.

Still lacking is the parabolic element longitudinally located, or the parabolic reflector . Parabolic reflectors were conventionally employed with the linear source lamps at the focus. This is taught by Oe, which explicitly makes such a statement in column 1, lines 16-22. Therefore, it would have been obvious, in the device of Bergman as modified by Doane et al, to employ a parabolic reflector with the linear source lamp at the focus as such was conventional at the time.

5. Claims 1-2, 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margerum et al, U.S. Patent # 5,099,343 in view of Doane et al, US Patent 5,240,636 and Parker, US Patent #6,079,838 as applied above, and further in view of Oe US Patent #5,711,589.

Parabolic reflectors were conventionally employed with the linear source lamps at the focus. This is taught by Oe, which explicitly makes such a statement in column 1, lines 16-22.

Therefore, it would have been obvious, in the device of Bergman as modified by Doane et al, to employ a parabolic reflector with the linear source lamp at the focus as such was conventional at the time.

Any assertion that something is well known is a taking of official notice.

Note: Any assertions that an element, practice or relationship was conventional has the incorporated motivations of the benefits of having established supply chains, well understood behavior and manufacturing methodologies.

Allowable Subject Matter

6. Claims 6 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, presuming that rejections over 35 USC 112 (if any) can be overcome.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Parker whose telephone number is **(703) 305-6202.** The fax phone number for this Group is **(703) 308-7722.** Any inquiry of a general nature or relating to the status of this application or preceding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

December 29, 2002

KENNETH ALLEN PARKER
PRIMARY PATENT EXAMINER
GAU 2871